

CLAIMS:

1. A process for the production of fats or oils and their extracts containing biologically-active chemical compounds from a lipid substrate, the process comprising:

a) inoculation of a lipid substrate with fungally derived lipolytic enzymes

b) incubating the inoculated substrate for a period of between about 7-120 days at a temperature of between about 4-35°C, at a humidity of between about 75-100%, and

c) processing said substrate mixture to obtain a biologically active fat or oil.

2. The process according to claim 1 wherein in step b) typically the period of incubation is between about 7 to 28 days at high humidity of between about 80-100%.

3. The process according to claim 1 wherein in step c), if the lipid is animal derived, it is typical that the product is a biologically active oil obtained by rendering said inoculated substrate.

4. The process according to claim 1 wherein in step c), if the lipid is plant or seed derived, the biologically active oil is obtained by cold pressing or solvent extraction of said inoculated substrate mixture.

5. The process according to claim 1 wherein the oil is prepared by solvent extraction using methanol at low temperature.

6. A biologically active fat or oil and extracts thereof produced according to the process of any one of claims 1 to 5.

7. A method of treating inflammatory conditions in a human or animal patient, which comprises administration to the patient of an effective amount of a biologically active oil or extract where the oil is prepared by fungal metabolism/transformation of lipid substrates to produce fats and more particularly oils and their extracts containing biologically-active chemical compounds.

8. The method according to claim 7, wherein the said administration is oral, transdermal or subcutaneous administration.

9. The method according to claim 7, wherein the said inflammatory conditions include musculo-skeletal disorders such as arthritis, including rheumatoid arthritis and osteoarthritis.

10. The method according to claim 7, wherein said inflammatory conditions include gastrointestinal disorders such as irritable bowel disease including Crohn's disease and ulcerative colitis.

11. The method according to claim 7, wherein said inflammatory conditions are respiratory diseases, including asthma.

12. The method according to claim 7, wherein the oil or extract is used as a pharmaceutically cream, prepared with one or more acceptable carriers or diluents.

13. Use of the oil and/or extracts as claimed in claim 6, in the manufacture of a medicament for use in the inhibition of LOX pathways, including inhibition of 5-HETE
s and/or 12-HETE.

14. Use of the oil and/or extracts as claimed in claim 6, in the manufacture of a medicament for use in the inhibition of cyclooxygenase enzymes (COX) pathways.

15. Use of the oil and/or extracts as claimed in claim 6, in the preparation of a medicament for the inhibition of C reactive protein pathway.